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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 16325-140PC	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/17825	International filing date (day/month/year) 04 June 2003 (04.06.2003)	Priority date (day/month/year) 04 June 2002 (04.06.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): G01N 33/566; A01N 38/18 and US Cl.: 436/501; 435/455; 514/2		
Applicant METABOLEX, INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>6</u> sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 05 January 2004 (05.01.2004)	Date of completion of this report 20 September 2004 (20.09.2004)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Bradley L. Sisson <i>Janice Ford</i> Telephone No. (703) 308-0196 <i>for</i>	

Form PCT/IPEA/409 (cover sheet)(July 1998)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17825

**I. Basis of the report****1. With regard to the elements of the international application:\***

- ☒ the international application as originally filed.
- ☒ the description:  
pages 1-127 and 134-137 as originally filed  
pages 128-133, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the claims:  
pages 138-140, as originally filed  
pages NONE, as amended (together with any statement) under Article 19  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☐ the drawings:  
pages NONE, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the sequence listing part of the description:  
pages 1-161, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17825

## III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The question whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

- ☒ the entire international application,  
☐ claims Nos. \_\_\_\_\_

because:

- ☐ the said international application, or the said claim Nos. \_\_\_\_\_ relate to the following subject matter which does not require international preliminary examination (*specify*):

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_ are so unclear that no meaningful opinion could be formed (*specify*):

- ☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed.

- ☒ no international search report has been established for said claims Nos. 1-24

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

- ☐ the written form has not been furnished or does not comply with the standard.  
☒ the computer readable form has not been furnished or does not comply with the standard.

## SEQ ID NO:103 Human TRP-MET nucleic acid sequence

gi|187558|gb|J02958.1|

CDS:195..4421

GAATTCCGCCCTCGCCGCCCGCGGCCCGAGCGCTTTGTGAGCAGATGCGGAGCCGAGTGGAGGGCGCGAGCC  
AGATGCGGGGCGACAGCTGACTTGCTGAGAGGAGGCGGGGAGGCGCGGAGCGCGCGTGTGGTCTTGCGCCGCTG  
ACTTCTCCACTGGTTCTTGGGCACCGAAAGATAAACCTCTCATAATGAAGGCCCCCGCTGTGCTTGCACCTGGCA  
TCCTCGTGCTCCTGTTTACCTTGGTGACAGAGGCAATGGGGAGTGTAAGAGGCACTAGCAAAGTCCGAGATGA  
ATGTGAATATGAAGTATCAGCTTCCCAACTTCACCGCGGAAACACCCATCCAGAATGTCATTCTACATGAGCATC  
ACATTTTCCTTGGTGCCACTAACTACATTTATGTTTTAAATGAGGAAGACCTTCAGAAGGTTGCTGAGTACAAGA  
CTGGGCCTGTGCTGGAACACCCAGATTGTTTCCCATGTCAGGACTGCAGCAGCAAAGCCAATTTATCAGGAGGTG  
TTTGAAAGATAACATCAACATGGCTCTAGTTGTGACACCTACTATGATGATCAACTCATTAGCTGTGGCAGCG  
TCAACAGAGGGACCTGCCAGCGACATGTCTTTCCCAACAATCATACTGCTGACATACAGTCGGAGGTTCACTGCA  
TATTCTCCCCACAGATAGAAGAGCCAGCCAGTGTCTTGACTGTGTGGTGAGCGCCCTGGGAGCCAAAGTCCTTT  
CATCTGTAAAGGACCGGTTTCATCAACTTCTTTGTAGGCAATACCATAAATTCTTCTTATTTCCAGATCATCCAT  
TGCATTGATATCAGTGAGAAGGCTAAAGGAAACGAAAGATGGTTTTATGTTTTTGACGGACCAGTCCTACATTG  
ATGTTTTACCTGAGTTCAGAGATTCTTACCCATTAAAGTATGTCCATGCCTTTGAAAGCAACAATTTTATTTACT  
TCTTGACGGTCCAAAGGGAACTCTAGATGCTCAGACTTTTCACACAAGAATAATCAGGTTCTGTTCCATAAACT  
CTGGATTGCATTCTACATGGAAATGCCTCTGGAGTGATTTCTCACAGAAAAGAGAAAAAAGAGATCCACAAAGA  
AGGAAGTGTTTAATATACTTCAGGCTGCGTATGTCAGCAAGCCTGGGGCCAGCTTGCTAGACAAATAGGAGCCA  
GCCTGAATGATGACATTCTTTTCGGGGTGTTTCGCACAAAGCAAGCCAGATTCTGCCGAACCAATGGATCGATCTG  
CCATGTGTGCATTCCCTATCAAATATGTCAACGACTTCTTCAACAAGATCGTCAACAAAAACAATGTGAGATGTC  
TCCAGCATTTTTTACGGACCCAATCATGAGCACTGCTTTAATAGGACACTTCTGAGAAATTCATCAGGCTGTGAAG  
CGCGCCGTGATGAATATCGAACAGAGTTTACCACAGCTTTGCAGCGCGTTGACTTATTCATGGGTCAATTCAGCG  
AAGTCCTCTTAACATCTATATCCACCTTCATTAAAGGAGACCTCACCATAGCTAATCTTGGGACATCAGAGGGTC  
GCTTCATGCAGGTTGTGGTTTCTCGATCAGGACCATCAACCCCTCATGTGAATTTTCTCCTGGACTCCCATCCAG  
TGCTCCAGAAGTGATTGTGGAGCATACATTAAACCAAAATGGCTACACACTGGTTATCACTGGGAAGAAGATCA  
CGAAGATCCCATTGAATGGCTTGGGCTGCAGACATTTCCAGTCCTGCAGTCAATGCCTCTCTGCCCCACCTTTG  
TTCAGTGTGGCTGGTGCCACGACAAATGTGTGCGATCGGAGGAATGCCTGAGCGGGACATGGACTCAACAGATCT  
GTCTGCCTGCAATCTACAAGTTTTTCCCAAATAGTGCACCCCTTGAAGGAGGGACAAGGCTGACCATATGTGGCT  
GGGACTTTGGATTTTCGGAGGAATAATAAATTTGATTTAAAGAAAACTAGAGTTCTCCTTGAAATGAGAGCTGCA  
CCTTGACTTTAAGTGAGAGCACGATGAATACATTGAAATGCACAGTTGGTCCTGCCATGAATAAGCATTTCAATA  
TGTCATAATTATTTCAAATGGCCACGGGACAACACAATACAGTACATTCTCCTATGTGGATCCTGTAATAACAA  
GTATTTGCGCGAAATACGGTCCATATGGCTGGTGGCACTTTACTTACTTTAACTGGAAATTACCTAAACAGTGGGA  
ATTCTAGACACATTTCAATTGGTGGAAAAACATGTACTTTAAAAAGTGTGTCAAACAGTATTCTTGAATGTTATA  
CCCCAGCCCAAACCATTTCAACTGAGTTTGCTGTAAATTGAAAATTGACTTAGCCAACCGAGAGACAAGCATCT  
TCAGTTACCGTGAAGATCCCATTGTCTATGAAATTCATCCAACCAAATCTTTTATTAGTACTTGGTGGAAAGAAC  
CTCTCAACATTGTCAGTTTTCTATTTTGCTTTGCCAGTGGTGGGAGCACAATAACAGGTGTTGGGAAAAACCTGA  
ATTAGTTAGTGTCGGGAGAATGGTCATAAATGTGCATGAAGCAGGAAGGAACCTTTACAGTGGCATGTCAACATC  
GCTCTAATTCAGAGATAATCTGTTGTACCACTCCTTCCCTGCAACAGCTGAATCTGCAACTCCCCCTGAAAACCA  
AAGCCTTTTTTCATGTTAGATGGGATCCTTTCCAAATACTTTGATCTCATTTATGTACATAATCCTGTGTTTAAGC  
CTTTTGAAAGCCAGTGATGATCTCAATGGGCAATGAAAATGTACTGGAAATTAAGGGAAATGATATTGACCCTG

AAGCAGTTAAAGGTGAAGTGTAAAAAGTTGGAAATAAGAGCTGTGAGAATATACACTTACATTCTGAAGCCGTTT  
TATGCACGGTCCCCAATGACCTGCTGAAATTGAACAGCGAGCTAAATATAGAGTGGAAAGCAAGCAATTTCTTCAA  
CCGTCTTTGGAAAAGTAATAGTTCAACCAGATCAGAAATTCACAGGATTGATTGCTGGTGTGTCTCAATATCAA  
CAGCACTGTTATTACTACTTGGGTTTTTCTGTGGCTGAAAAGAGAAAGCAAATTAAAGATCTGGGCAGTGAAT  
TAGTTGCTACGATGCAAGAGTACACACTCCTCATTGGATAGGCTTGTAAGTGCCCGAAGTGTAAGCCCAACTA  
CAGAAATGGTTTTCAAATGAATCTGTAGACTACCGAGCTACTTTTCCAGAAGATCAGTTTCCCTAATTCATCTCAGA  
ACGGTTCATGCCGACAAGTGCAGTATCCTCTGACAGACATGTCCCCCATCCTAACTAGTGGGGACTCTGATATAT  
CCAGTCCATTACTGCAAAATACTGTCCACATTGACCTCAGTGCTCTAAATCCAGAGCTGGTCCAGGCAGTGCAGC  
ATGTAGTGATTGGGCCCAGTAGCCTGATTGTGCATTTCAATGAAGTCATAGGAAGAGGGCATTTTGGTTGTGTAT  
ATCATGGGACTTTGTTGGACAATGATGGCAAGAAAATTCAGTGTGCTGTGAAATCCTTGAACAGAATCACTGACA  
TAGGAGAAGTTTCCCAATTTCTGACCGAGGGAATCATCATGAAAGATTTTAGTCATCCCAATGTCCTCTCGCTCC  
TGGGAATCTGCCTGCGAAGTGAAGGGTCTCCGCTGGTGGTCTTACCATACATGAAACATGGAGATCTTCGAAATT  
TCATTGAAATGAGACTCATAATCCAAGTGTAAAGATCTTATTGGCTTTGGTCTTCAAGTAGCCAAAGCGATGA  
AATATCTTGCAAGCAAAAAGTTTGTCCACAGAGACTTGGCTGCAAGAACTGTATGCTGGATGAAAAATTCACAG  
TCAAGGTTGCTGATTTTGGTCTTGCCAGAGACATGTATGATAAAGAATACTATAGTGTACACAACAAAACAGGTG  
CAAAGCTGCCAGTGAAGTGGATGGCTTTGGAAAGTCTGCAAACTCAAAGTTTACCACCAAGTCAGATGTGTGGT  
CCTTTGGCGTCGTCCTCTGGGAGCTGATGACAAGAGGAGCCCCACCTTATCCTGACGTAAACACCTTTGATATAA  
CTGTTTACTTGTGCAAGGGAGAAGACTCCTACAACCCGAATACTGCCAGACCCCTTATATGAAGTAATGCTAA  
AATGCTGGCACCCTAAAGCCGAAATGCGCCCATCTTTTCTGAACTGGTGTCCCGGATATCAGCGATCTTCTCTA  
CTTTCATTGGGGAGCACTATGTCCATGTGAACGCTACTTATGTGAACGTAAAATGTGTGCTCGCTCCGTATCCTTCTC  
TGTTGTATCAGAAAGATAACGCTGATGATGAGGTGGACACACGACCAGCCTCCTTCTGGGAGACATCATAGTGCT  
AGTACTATGTCAAAGCAACAGTCCACACTTTGTCCAATGGTTTTTTTCACTGCCTGACCTTTAAAAGGCCATCGAT  
ATTCTTTGCTCCTTGCCATAGGACTTGTATTGTTATTTAAATTACTGGATTCTAAGGAATTTCTTATCTGACAGA  
GCATCAGAACCAGAGGCTTGGTCCCACAGGCCAGGGACCAATGCGCTGCAG

**SEQ ID NO:104 Human TRP-MET polypeptide sequence**

gi|307196|gb|AAA59591.1|

MKAPAVLAPGILVLLFTLVQRSNGECKEALAKSEMNVNMKYQLPNFTAETPIQNVILHEHHIFLGATNYIYVLNE  
EDLQKVAEYKTGPVLEHPDCFPQCDCSSKANLSGGVWKDNINMALVVDYDDQLISCGSVNRGTCQRHVFPNH  
TADIQSEVHCIFSPQIEEPSQCPDCVVSALGAKVLSSVKDRFINFFVGNTINSSYFPDHPHLSISVRRLKETKD  
FMFLTDQSYIDVLPFRDSYPIKYVHAFESNNFIYFLTVQRETLDQTFHTRIIRFCSINSGLHSEMPLECIL  
TEKRKKRSTKKEVFNILQAAYVSKPGAQLARQIGASLNDDILFGVFAQSKPDSAEPMDRSAMCAFPKIYVNDFFN  
KIVNKNVRLQHFYGPNEHCNRTLLRNSSGCEARRDEYRTEFTALQRVDLFMGQFSEVLLTSISTFIKGD  
TIANLGTSEGRFMQVVVSRSGPSTPHVNFLLDSHPVSPEVIVEHTLNQNGYTLVITGKKITKIPLNGLGCRHFQS  
CSQCLSAPPFVQCGWCHDKCVRSEECLSGTWTQOICLPAIYKVPNSAPLEGGTRLTICGWDFGFRNNKFDLKK  
TRVLLGNESCTLTLSSESTMTNLKCTVGPAMNKHFNMSIIISNGHGTQYSTFSYVDPVITSISPKYGPMAAGTLL  
TLTGNYLNSGNSRHISIGGKCTCLKSVNSILECYTPAQTISTEFAVKLKIDLANRETSIFSYPREDPIVYIEHPT  
KSFISTWWKEPLNIVSFLFCFASGGSTITGVGKNLNSVSPRMVINVHEAGRNFTVACQHRNSSEIICCTTPSLQ  
QLNLQLPLKTKAFFMLDGLSKYFDLIYVHNPVFKPFEPVMISMGNENVLEIKGNDIDPEAVKGEVLKVGKNSC  
ENIHLHSEAVLCTVPNDLLKLNSELNIEWKQAISSTVLGKIVIQPDQNFGLIAGVVSISTALLLLLGFFLWLKK

PET40503.17825.05012004

RKQIKDLGSELVRYDARVHTPHLDRLVSARSVSPTTEMVSNESVDYRATFPEDQFPNSSQNGSCRQVQYPLTDMSPILTS  
GSDSDISSPLLQNTVHIDLSALNPELVQAVQHVVIGPSSLIHFNEVIGRGHFGCVYHGTLDDNDGKKIHC  
AVKSLNRITDIGEVSQFLTEGIIMKDFSHPNVLSLLGICLRSEGSPLVVLPMKHGDLRNFIRNETHNPTVKDLI  
GFGQLQVAKAMKYLASKKFVHRDLAARNCMLDEKFTVKVADFLARDMYDKEYYSVHNKTGAKLPVKWMALESLOT  
QKFTTKSDVWSFGVVLWELMTRGAPPYPDVNTFDITVYLLQGRLLQPEYCPDPLYEVMKLCWHPKAEMRPSFSE  
LVSRI SAIFSTFIGEHYVHV NATYVNVKCVAPYPSLLSSEDNADDEVDT RPASFWETS

**SEQ ID NO:105 Mouse TRP-MET nucleic acid sequence**

gi|6678867|ref|NM\_008591.1|

CDS:1..4140

ATGAAGGCTCCCACCGTGCTGGCACCTGGCATTCTGGTGCTGCTGTTGTCCTTGGTGCAGAGGAGCCATGGGGAG  
TGCAAGGAGGCCCTAGTGAAGTCTGAGATGAACGTGAACATGAAGTATCAGCTCCCCAAGTTCACGGCAGAAACC  
CCCATCCAGAATGTCGTCCTACACGGCCATCATATTTATCTCGGAGCCACAACTACATTTATGTTTTAAATGAC  
AAAGACCTTCAGAAGGTATCCGAATTCAAGACCGGGCCCGTGTGGAAACACCCAGATTGTTTACCTTGTCGGGAC  
TGCAGCAGCAAAGCCAATTCATCAGGAGGGGTGTGGAAAGACAACATCAACATGGCTCTGCTTGTGACACATAC  
TATGATGATCAACTCATTAGCTGTGGCAGTGTCAACAGAGGGACTTGCCAGCGGCATGTCCTTCCTCCTGACAAT  
TCTGCTGACATCCAGTCTGAGGTCCACTGCATGTTCTCCCCAGAAGAGGAGTCAGGGCAGTGTCTGACTGTGTA  
GTGAGTGCCCTCGGAGCCAAAGTCTCCTGTGCGAAAGGACCGGTTTCATCAATTTCTTTGTGGGGAATACGATC  
AATTCCTCCTATCCTCCTGGTTATTCACTGCATTCGATATCGGTGAGACGGCTGAAGGAAACCCAAGATGGTTTT  
AAGTTTTTGACAGACCAGTCTATATTGATGTCTTACCAGAATTCCTTGATTCTTACCCCATAAAGTACATACAT  
GCCTTCGAAAGCAACCATTTTATTTACTTTCTGACTGTCCAAAGGAACTCTAGATGCTCAGACTTTTCATACA  
AGAATAATCAGGTTCTGTTCCGTAGACTCTGGGTGCACTCCTACATGGAAATGCCCCCTGGAATGCATCCTGACA  
GAAAAAAGAAGGAAGAGATCCACAAGGGAAGAAGTGTTTAATATCCTCCAAGCCGCGTATGTGAGTAAACCAGGG  
GCCAATCTTGCTAAGCAAATAGGAGCTAGCCCTTCTGATGACATTCTCTTCGGGGTGTGTTGCACAAAGCAAGCCA  
GATTCTGCTGAACCTGTGAATCGATCAGCAGTCTGTGCATTCCCCATCAAATATGTCAATGACTTCTTCAACAAG  
ATTGTCAACAAAAACAACGTGAGATGTCTCCAGCATTTTTACGGACCCAACCATGAGCACTGTTTCAATAGGACC  
CTGCTGAGAACTCTTCGGGCTGTGAAGCGCGCAGTGACGAGTATCGGACAGAGTTTACCACGGCTTTGCAGCGC  
GTCGACTTATTCATGGGCCGGCTTAACCAAGTGCTCCTGACATCCATCTCCACCTTCATCAAAGGTGACCTCACC  
ATTGCTAATCTAGGGACGTGAGAAGGTGCTTCATGCAGGTGGTGCTCTCTCGAACAGCACACCTCACTCCTCAT  
GTGAACTTCCTCCTGGACTCCCATCCTGTATCTCCAGAAGTTATTGTTGAGCATCCATCAAATCAAATGGCTAT  
ACATTGGTTGTCACAGGAAAGAAGATCACCAAGATTCATTGAATGGCCTGGGCTGTGGACATTTCCAATCCTGC  
AGTCAGTGCCCTCTGCCCCCTTACTTTATACAGTGTGGCTGGTGCCACAATCAATGTGTGCGTTTTGATGAATGC  
CCCAGCGGTACATGGACTCAAGAGATCTGTCTGCCAGCGGTTTATAAGGTGTTCCCCACCAGCGCGCCCCCTTGAA  
GGAGGAACAGTGTTGACCATATGTGGCTGGGACTTTGGATTGAGGAAGAATAATAAATTTGATTTAAGGAAAACC  
AAAGTTCTGCTTGGCAACGAGAGCTGTACCTTGACCTTAAGCGAGAGCACGACAAATACGTTGAAATGCACAGTT  
GGTCCCGCGATGAGTGAGCACTTCAATGTGTCTGTAATTATCTCAAACAGTCGAGAGACAACAATAACAGTGCA  
TTCTCCTATGTAGATCCTGTAATAACAAGCATTTCTCCGAGGTACGGCCCTCAGGCTGGAGGCACCTTACTCACT  
CTTACTGGGAAATACCTCAACAGTGGAATTCTAGACACATTTCAATTGGAGGGAAAACATGTACTTTAAAAAGT  
GTATCAGATAGTATTCTTGAATGCTACACCCAGCCCAAACCTCTGATGAGTTTCTGTGAAATTGAAGATT  
GACTTGGCTAACCGAGAGACCAGCAGCTTCAGTTACCGGAAGACCCCGTTGTCTATGAAATCCACCCAAACAAA  
TCTTTTATTAGTGGTGAAGCACATAACGGGTATTGGGAAGACCTGAATTCGGTTAGCCTCCCAAAGCTGGTA

ATAGATGTGCATGAAGTGGGTGTGAACACAGTGGCATGTCAGCATCGCTCAAATTCAGAGATCATCTGCTGC  
ACTACTCCTTCACTGAAACAGCTGGGCCTGCAACTCCCCCTGAAGACCAAAGCCTTCTTCCTGTTAGACGGGATT  
CTTTCCAAACACTTTGATCTCACTTATGTGCATAATCCTGTGTTTGAGCCCTTTTGAAAAGCCAGTAATGATCTCA  
ATGGGCAATGAAAATGTAGTGGAATTAAGGGAAACAATATTGACCCTGAAGCAGTTAAAGGTGAAGTGTTAAAA  
GTTGGAAATCAGAGCTGCGAGAGTCTCCACTGGCACTCTGGAGCTGTGTTGTGTACAGTCCCCAGTGACCTGCTC  
AAACTGAACAGCGAGCTAAATATAGAGTGGAAGCAAGCAGTCTCTTCAACTGTTCTTGAAAAGTGATCGTTCAA  
CCGGATCAGAATTTTGCAGGATTGATCATTGGTGCGGTCTCAATATCAGTAGTAGTTTTGTTATTATCCGGGCTC  
TTCCTGTGGATGAGAAAGAGAAAGCATAAAGATCTGGGCAGTGAATTAGTTTCGCTATGACGCAAGAGTACACACT  
CCTCATTGGATAGGCTTGTAAGTGCCCGAAGTGTAAGTCCAACACTACAGAGATGGTTTTCAAATGAGTCTGTAGAC  
TACAGAGCTACTTTTCCAGAAGACCAGTTTCCCAACTCCTCTCAGAAATGGAGCATGCAGACAAGTGCAATATCCT  
CTGACAGACCTGTCCCCTATCCTGACGAGTGGAGACTCTGATATATCCAGCCCATTACTACAAAATACTGTTTAC  
ATTGACCTCAGTGCTCTAAATCCAGAGCTGGTCCAAGCAGTTTACGACGTAAGTGGACCCAGCAGCTGATT  
GTGCATTTCAATGAAGTCATAGGAAGAGGGCATTGTTGGCTGTGTCTATCATGGGACTTTGCTGGACAATGACGGA  
AAGAAAATTCAGTGTGCTGTGAAATCCTTGAATAGAATCACAGATATAGAAGAGGTCTCCAGTTTCTGACTGAG  
GGAATCATCATGAAAGACTTCAGCCATCCCAATGTTCTCTCACTCTTGGGAATCTGCTGAGGAGTGAAGGGTCT  
CCTCTGGTGGTCTGCCCCTATATGAAGCATGGAGATCTGCGAAATTTCAATTCGAAACGAGACTCATAATCCAAC  
GTGAAAGATCTTATAGGATTTGGCCTTCAAGTAGCCAAAGGCATGAAATATCTTGCCAGCAAAAAGTTTGTCCAC  
AGAGACTTAGCTGCAAGAACTGCATGTTGGATGAAAATTCAGTGTCAAGGTTGCTGATTTCCGGTCTTGCCAGA  
GACATGTACGATAAAGAGTACTATAGTGTCCACAACAAGACGGGTGCCAAGCTACCAGTAAAGTGGATGGCTTTA  
GAGAGTCTGCAAACGCAGAAAGTTCACCACCAAGTCAGATGTGTGGTCTTTGGTGTGCTCCTCTGGGAGCTCATG  
ACGAGAGGAGCCCCCTCCTTATCCCCGACGTGAACACATTTGATATCACTATCTACCTGTTGCAAGGCAGAAGACTC  
TTGCAACCAGAATACTGTCCAGACGCCTTGACGAAGTGATGCTAAAATGCTGGCACCCCAAAGCGGAAATGCGC  
CCGTCCTTTTCCGAACCTGGTCTCCAGGATATCCTCAATCTTCTCCACGTTTATTGGGGAACACTACGTCCACGTG  
AACGCTACTTATGTGAATGTAAATGTGTTGCTCCATATCCTTCTCTGTGTCATCCCAAGACAACATTGATGGC  
GAGGGGAACACATGA

**SEQ ID NO:106 Mouse TRP-MET polypeptide sequence**

gi|6678868|ref|NP\_032617.1|

MKAPTVLAPGILVLLLSLVQRSHGECKEALVKSEMNVMKYQLPNFTAETPIQNVVLHGHHIYLGATNYIYVLND  
KDLQKVSEFKTGVPVLEHPDCLPCRDCSSKANSSGGVWKNINMALLVDITYDDQLISCGSVNRGTCQRHVLPPDN  
SADIQSEVHCFMFSPEEESGQCPDCVVSALGAKVLLSEKDRFINFFVGNTINSSYPGYSLSHSISVRRLKETQDGF  
KFLTDQSYIDVLPEFLDSYPIKYIHAFESNHFIYFLTVQKETLDAQTFHTRIIRFCSVDSGLHSYMEMPLECILT  
EKRRKRSTREEVFNILQAAYVSKPGANLAKQIGASPSDDILFGVFAQSKPDSAEPVNRSAVCAFPPIKYVNDFFNK  
IVNKNMVRCLQHFYGPNEHCFNRLLRNSSGCEARSDEYRTEFTTALQRVDLFMGRNLNQLVLLTSISTFIKGLT  
IANLGTSEGRFMQVVLRSRTAHLTPHVNFLLDSDHPVSPEVIVEHPSNQNGYTLVVTGKKITKIPLNGLGCGHFQSC  
SQCLSAFYFIQCGWCHNQCVRFDECPSTWTQEIICLPVYKVFPTSAPLEGGTVLTICGWDFGRKNNKFDLRKT  
KVLLGNESCTLTLESTTNTLKCTVGPAMSEHFNVSIIISNSRETTQYSAFSYVDPVITSISPRYGPQAGGTLT  
LTGKYLNSGNSRHISIGGKTCTLKSVDSDSILECYTPAQTTSDEFVVKLKIDLANRETSSFSYREDPVVYEIHPTK  
SFISGGSTITGIGKTLNSVSLPKLVIDVHEVGVNVTACQHRNSNEIICCTTPSLKQLGLQLPLKTKAFFLLDGI  
LSKHFDLTYVHNPVFEPFEKPMISMGNENVVEIKGNNIDPEAVKGEVLKVGNNQSCESLHWHSGAVLCTVPSDLL

KLNSELNIEWKQAVSSTVLGKVIVQPDQNFAGLIIGAVSISVVVLLLSGLFLWMRKRKHKDLGSELVRYDARVHT  
PHLDRLVSARSVSPTTEMVSNESVDYRATFPEDQFPNSSQNGACRQVQYPLTDLSPILTSGDSDISSPLLQNTVH  
IDLSALNPELVQAVQHVVIGPSSLIVHFNVEVIGRGHFGCVYHGTLTDNDGKKIHCAVKSLNRITDIEEVSQFLTE  
GIIMKDFSHPNVLSLLGICLRSEGSPLVVL PVMKHGDLRNFIRNETHNPTVKDLIGFGLQVAKGMKYLASKKFVH  
RDLAARNCMLDEKFTVKVADFGFLARDMYDKEYYSVHNKTGAKLPVKWMALESLOTQKFTTKSDVWSFGVLLWELM  
TRGAPPYPDVNTFDITIIYLLQGRLLQPEYCPDALYEVMLKCWHPKAEMRPSFSELVSRISISFSTFIGEHYVHV  
NATYVNVKCVAPYPSLLPSQDNIDGEGNT

**SEQ ID NO:107 Rat TRP-MET nucleic acid sequence**

gi|13928699|ref|NM\_031517.1|

ATGAAGGCTCCCACCGCGCTGGCACCTGGCATTCTGCTGCTGCTGCTGACCTTGGCGCAGAGGAGCCATGGGGAG  
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